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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,215	01/25/2005	Shishido Kanji	MOR-C517	8801

7590 02/13/2007  
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Alexandria, VA 22305

EXAMINER
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SANGHAVI, HEMANG

ART UNIT	PAPER NUMBER
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2874

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/523,215	<b>Applicant(s)</b> KANJI ET AL.	
	<b>Examiner</b> Hemang Sanghavi	<b>Art Unit</b> 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-16 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>03/11/2005</u> . | 6) <input type="checkbox"/> Other: ____  |

### **DETAILED ACTION**

The receipt of the preliminary amendment filed on January 25, 2005 is acknowledged.

#### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Information Disclosure Statement***

The prior art documents submitted by Applicant(s) in the Information Disclosure Statement(s) filed on 08/24/05 have all been considered and made of record (note the attached copy of form(s) PTO-1449).

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-6 and 8-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Singh et al (US 6,005,999).

Singh et al discloses an optical fiber grating filter comprising a refractive index grating portions to selectively reflect incident light with a reflection factor of 90%. See Figs. 7(a)-7(c).

As to claims 2-3, Singh et al discloses a series of slanted grating portions, i.e. first, second, third and fourth. See Figs. 1(b) and 7(a)-7(c) and respective selective reflection of incident light in the first, second, third, and forth grating portions. See lines 60-65 of column 11 and 1-30 of column 12.

In reference to claim 4, as can be seen in Fig. 1(b), the grating portions are formed in series.

Singh et al fails to disclose or state that the loss due to the coupling to a clad mode is less than 5 dB for the reflected light with a reflection factor of 90% and the loss due to the coupling to a clad mode is 5 dB or more for the reflected light with a reflection factor of 10% or more.

However, in lines 50-60 of column 7, Singh et al discloses that the tilt in the grating produces a cladding-mode loss. The ordinary artisan would certainly measure the loss associated with coupling to the clad mode, since the selectivity of the tilt angle of the grating is based on the desired coupling loss. From teachings of Singh et al,

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configuring the tilt angle of the grating to provide optimum desired coupling mode loss (i.e. less than 5 dB or more than 5 dB) would be within the reach of the ordinary artisan.

Thus, from teachings of Singh et al, the ordinary artisan would have found it to be obvious at the time of the invention to provide the loss due to the coupling to a clad mode is less than 5 dB for the reflected light with a reflection factor of 90% and the loss due to the coupling to a clad mode is 5 dB or more for the reflected light with a reflection factor of 10% or more for the purpose of advantageously providing desired passband filter.

As to claims 8-9 and 11-16, Singh et al fails to explicitly teach the use of fiber grating with an optical coupler or an optical connector.

However, it is extremely well known in the art to apply a fiber Bragg grating filter in an optical fiber of an optical coupler or an optical connector for the purpose of utilizing the filter in optical communication systems (i.e. channel add/drop systems).

From available well known knowledge, the ordinary artisan would have found it to be obvious at the time of the invention to utilize the filter of Singh et al in an optical coupler or an optical connector for the purpose of adding/dropping the desired channels in optical communication system.

#### ***Allowable Subject Matter***

Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art fails to disclose or suggest the claimed fiber Bragg grating wherein one of the refractive index grating portion has a slant angle

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of an inverse sign opposite to the first predetermined slant angle of the other refractive index grating portion.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cohn, Riant et al, Byron, Strasser et al, and Tomlinson, III et al discloses a slanted fiber Bragg grating.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hemang Sanghavi whose telephone number is (571) 272-9955. The examiner can normally be reached on Mon-Fri.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Hemang Sanghavi  
Primary Examiner  
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